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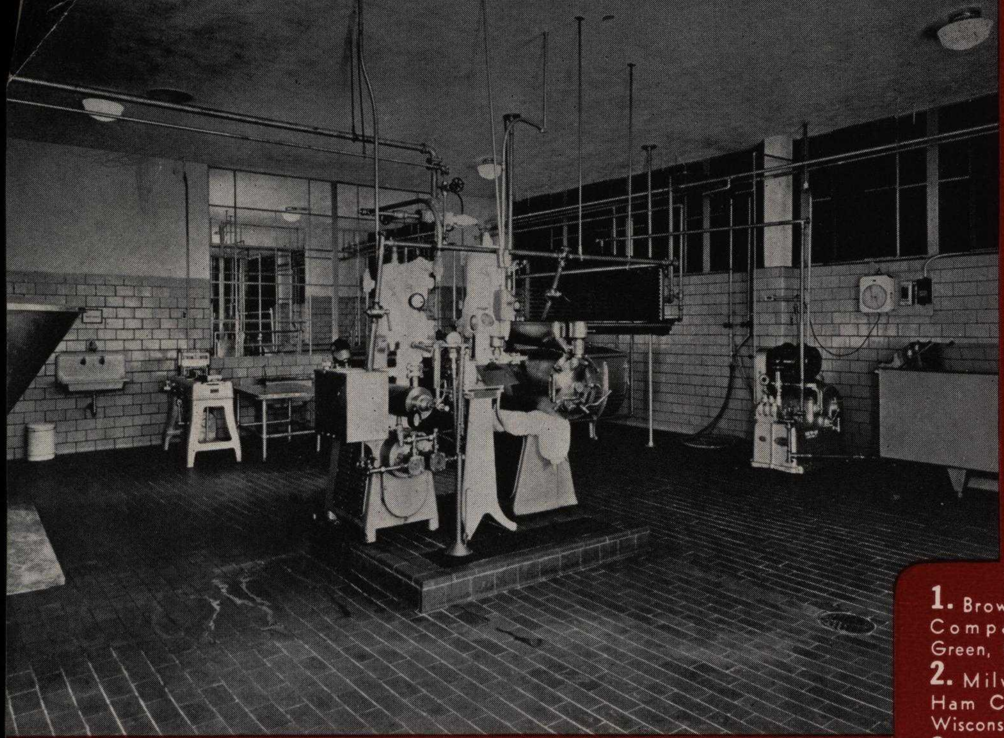
THE GAGNON CLAY PRODUCTS CO.

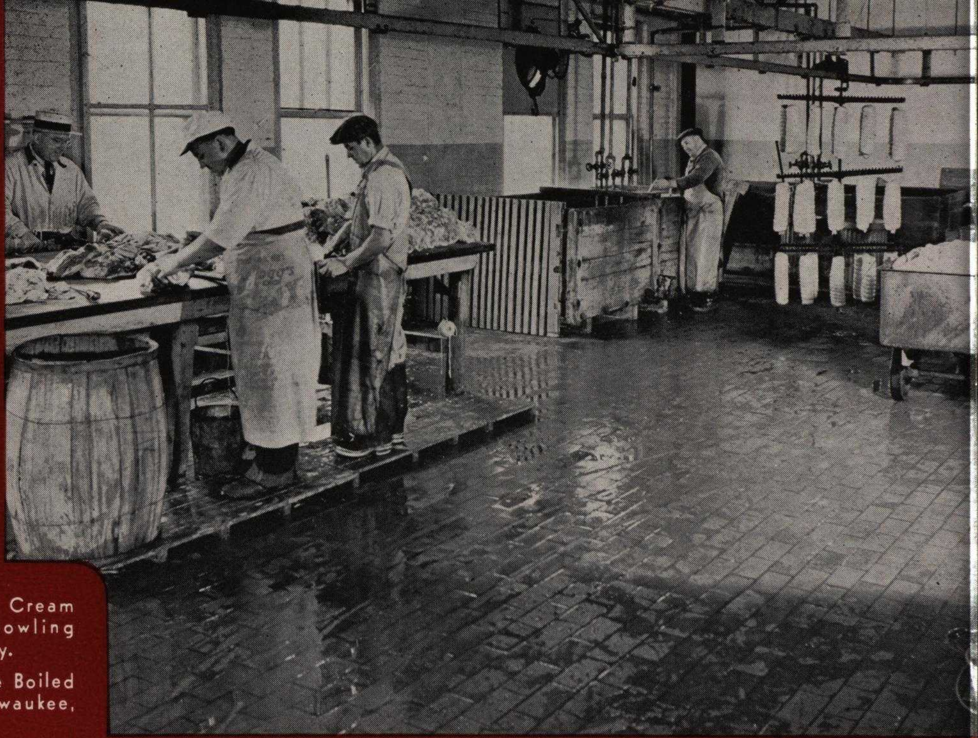
PHONE HOWARD 78 • 526 SOUTH BROADWAY
GREEN BAY, WISCONSIN

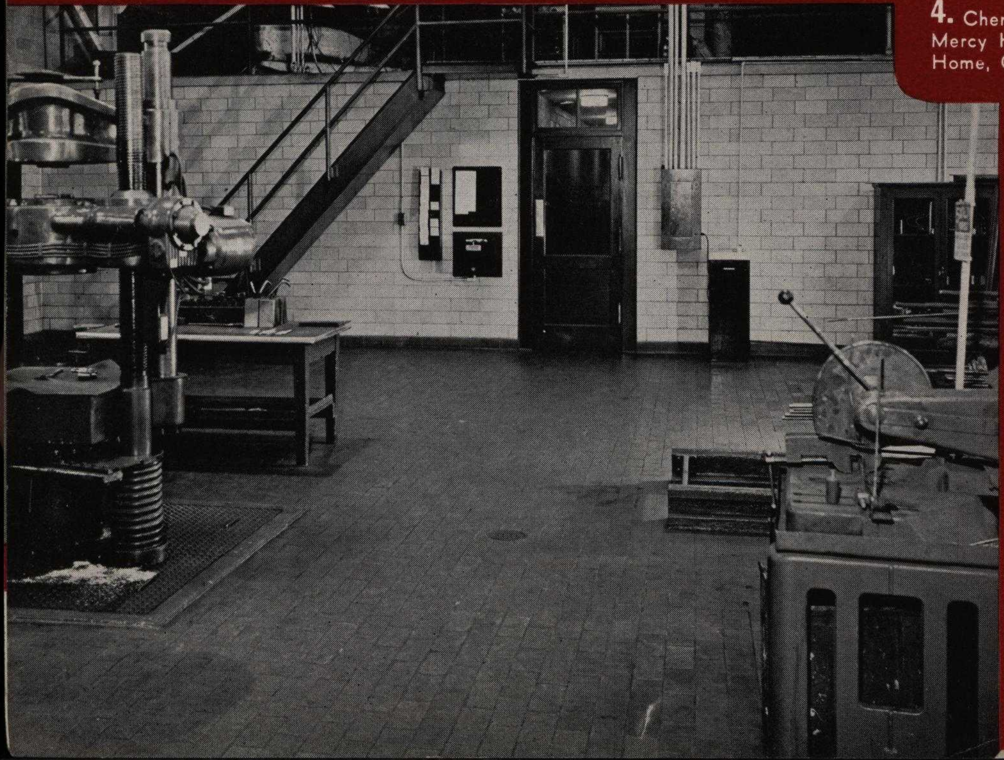
Belden

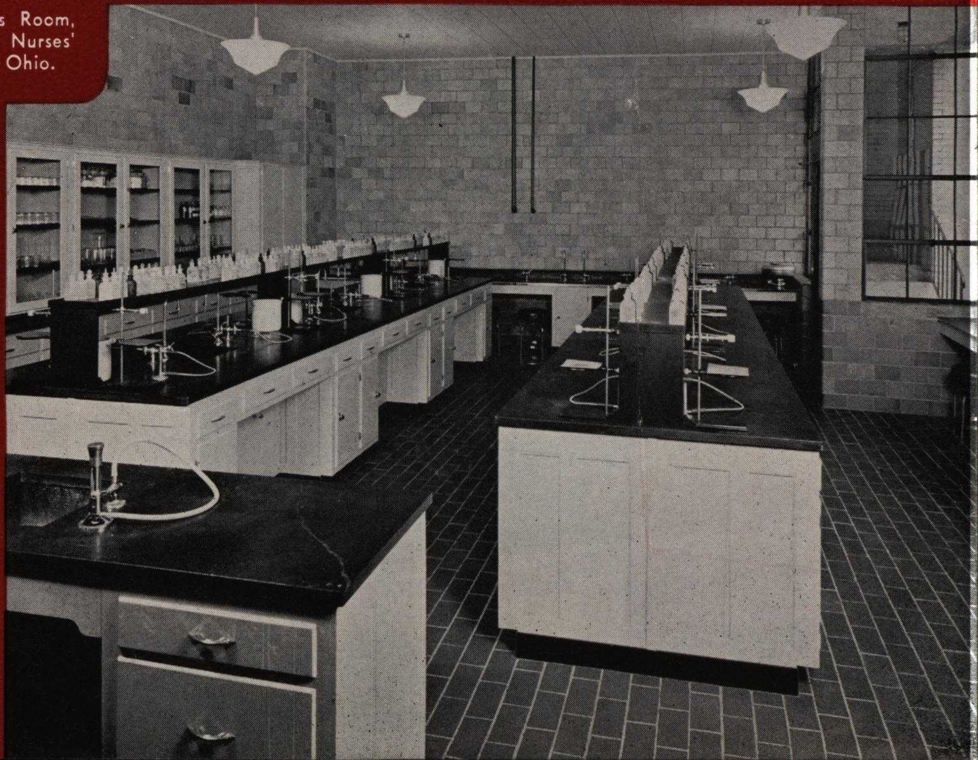
SINCE 1885

ACID-PROOF BRICK FLOORS









1. Brown Ice Cream Company, Bowling Green, Kentucky.
2. Milwaukee Boiled Ham Co., Milwaukee, Wisconsin.
3. Laboratory, Globe Steel Tubes Co., Milwaukee, Wis.
4. Chem. Class Room, Mercy Hospital Nurses' Home, Canton, Ohio.

STAMINA! Belden Brick Floors Withstand Every Industrial Ordeal...!

As a "base of operations", industrial floors demand prime consideration in purchase and maintenance. Individual management engineers, while fully conscious of their immediate problems, can profit by the experience of Belden engineers, whose wide surveys of diverse flooring materials and installations have revealed a number of significant facts.

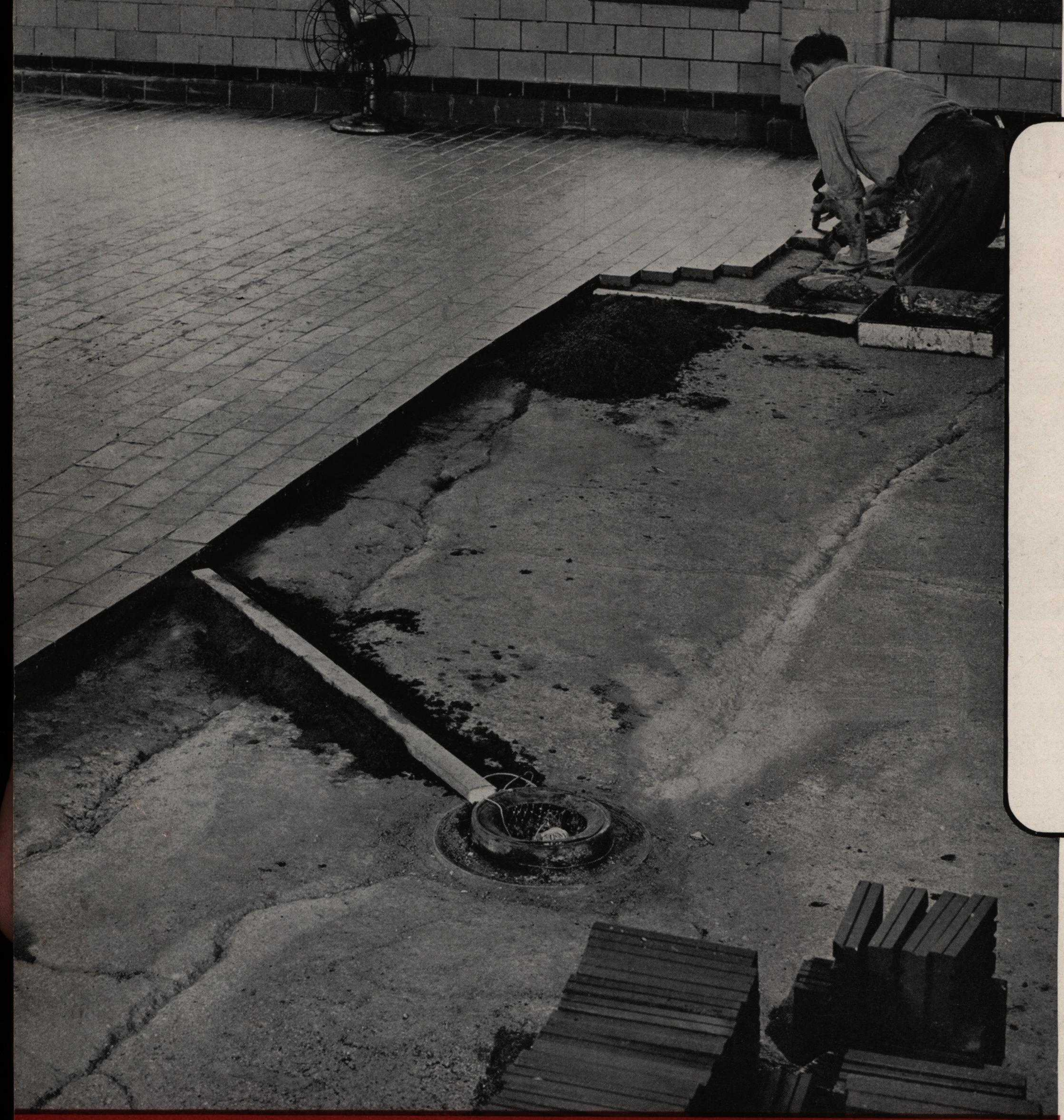
By and large, throughout industry, the most punished part of a plant is the floor. No other structural element meets similar wear and attack from physical and chemical forces. Within a single area of operations the floor may be expected to withstand thermal shock, water, wheeled traffic, oils, acids and alkalis; abrasion and impact of heavy materials add their strain.

Concrete, wood block, asphalt, and dirt floors have all been used by industry for limited applications. None of these materials will successfully combine all the qualities of low maintenance cost, long life, resistance to impact and abrasion, non-absorption of water and oil, proof against acids and alkalis, cleanliness and efficient appearance.

BELDEN ACID-PROOF BRICK FLOORS will meet and beat singly or in combination the majority of industrial threats to floors. Specifically engineered to the demands of many industries, Belden stamina has proved the answer to flooring problems generally. For Belden Acid-Proof Brick is not an adaptation of a few virtues; it has no superficial qualities that *might* be useful just by chance. Every property of a Belden Floor is integral — built in and inseparable. That's what gives such welcome assurance to plant managers whose processes may change, whose materials may vary and whose long-range floor maintenance cost must be kept down. Belden Floors will take whatever comes, and continue to deliver the same unwaveringly efficient service.

Dairies, foundries, meat packers, food preparation plants, machine shops . . . an unending compilation . . . attest to Belden's victory over the forces of destruction to which old type floors fell easy victims.

No Other Floor Has The Inherent Advantages of Belden Brick!



TANNERIES · F
FOUNDRIES ·
BREWERIES A

Modernize

THERE is no need to continue costly patching and repairing of old floors. Belden Acid Proof Brick Floors can be applied easily right over old floor surfaces to completely eliminate your floor maintenance problem. The illustration at the left is an excellent and typical example of Belden Floor Brick being laid over the old, worn-out surface in a large midwestern milk plant. In this case the brickmason is laying an acid resistant job with acid proof compound. He must butter each brick and set in place assuring a joint thickness of not more than one-eighth inch. Whatever your present type floor, and regardless of its condition, Belden Floor Brick will cover it with a modern, uniform surface of pleasing appearance and enduring serviceability.

Suggestions

FOR NEW FLOORS IN NEW BUILDINGS

ICKLING · BAKING · DAIRIES · CANNERIES · CONFECTIONERIES
ABORATORIES · MEAT PACKING · CHEMICAL PLANTS · HOSPITALS
D DISTILLERIES · METAL TREATING ROOMS · MACHINE SHOPS

Your Floors Quickly, Easily with Belden Brick!

Specify Belden Brick
APPLIED OVER OLD FLOORS ACCORDING TO THESE INSTRUCTIONS
for ACID-PROOF FLOORS

★ Each installation of a Belden Acid Proof Floor should be studied for the particular conditions under which it is to be made. The Belden Engineering Department will gladly advise purchasers and contractors on special jobs. Generally speaking, any reliable brickmason can lay a Belden Acid Proof Brick Floor. Full descriptive literature will be furnished for the guidance of workmen.

In a typical installation of an Acid Proof Brick Floor over old concrete base, this procedure is to be followed. All grease is removed from old floor by applying dry a mixture of one-third Tri-Sodium Phosphate and two-thirds Caustic Soda, and scrubbing with a stiff brush or broom and water. After the grease is dissolved, flush clean with clear water and let stand until all surface water has dried.

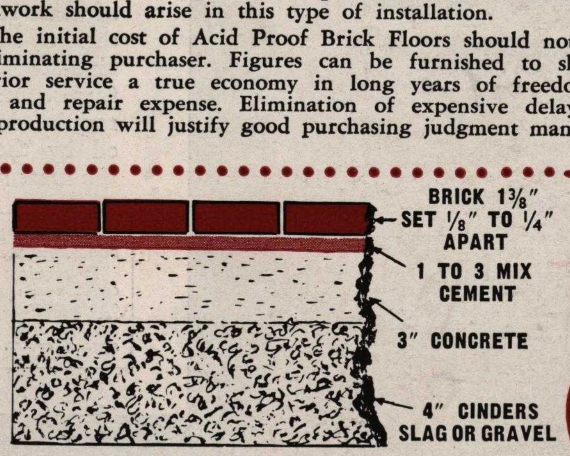
A new cement base, (mixed stiff, usually 1 to 3 mix), is applied over the old floor. The thickness of the base depends on the slope for the drains, but should not be less than ½″ thick so a good bond with the old floor will result. The slope to the drains is usually ¼″ to the foot. If early use of the floor is desirable—16 to 20 hours after laying—High-Early Cement should be used in the mix. The mason laying the Floor Brick should lay only as much base at a time as he can cover in approximately an hour.

If Acid Proof compound is used for the joints, the practice is to butter the Belden Floor Brick and set and tamp in place while the base is green, squeezing the Acid Proof compound solidly into the joints and tamping the Floor Brick firmly into the base, cutting off the surplus compound promptly before it sets. Care should be used not to squeeze the Portland Cement mortar up between the Floor Brick joints, and this is not likely to happen if the base is stiff. Joints should not exceed ⅛″ in thickness.

A second type of Acid Proof Floor is installed by a hot pouring process, using Sulphur Base Cements.

Where no acid condition exists or is foreseen, plain cement grouting is most economical. No technical problems other than those usual in brickwork should arise in this type of installation.

The initial cost of Acid Proof Brick Floors should not mislead the discriminating purchaser. Figures can be furnished to show Belden's superior service a true economy in long years of freedom from upkeep and repair expense. Elimination of expensive delays in service and production will justify good purchasing judgment many times over.



CROSS SECTION OF NEW FLOOR

For the majority of the new Belden Brick Floor installations, bricks of 1⅜″ thickness laid on a concrete base 3″ thick will meet every requirement. The base should be of 1 to 3 mix and should have a minimum of water content. Only as much base should be laid at a time as the mason can cover in approximately one hour. The Floor Brick should be set and tamped in place while the base is green.

If you will write us, describing conditions that your floor will be called upon to meet, we will be pleased to offer our best advice regarding type of installation.

Belden Floor Brick can be laid in a wide variety of bonds and patterns — brick bond, herringbone bond, basket bond, are examples of treatment which adds beauty and interest to the utility of the product. The thickness of the mortar joint can be varied from ⅛″ to 1″, depending upon the taste and the results desired. The color of the mortar joint can be whatever the customer desires, be it white, gray, chocolate, black or red.

Where a floor will receive heavy traffic or severe impacts, both a heavier base and a thicker floor brick unit than the above should be used. This is the reason Belden Floor Brick is available from 1⅜″ to 4½″ thick.

If there is an acid condition strong enough to attack ordinary cements, then an acid proof cement should be used.

Names of reliable manufacturers of acid proof cement will be sent when requested.

If the floor is to be laid on the ground, a sub-foundation of cinders, slag or gravel 4″ thick under the concrete is desirable to prevent moisture in the concrete base. The sub-foundation should be tamped solid before applying the concrete base.

Belden
ACID-PROOF
BRICK FLOORS

There is a Size - a Shape and a Surface for Every Purpose in

VARIED THICKNESSES AVAILABLE

8¼ x 4 x 1⅜

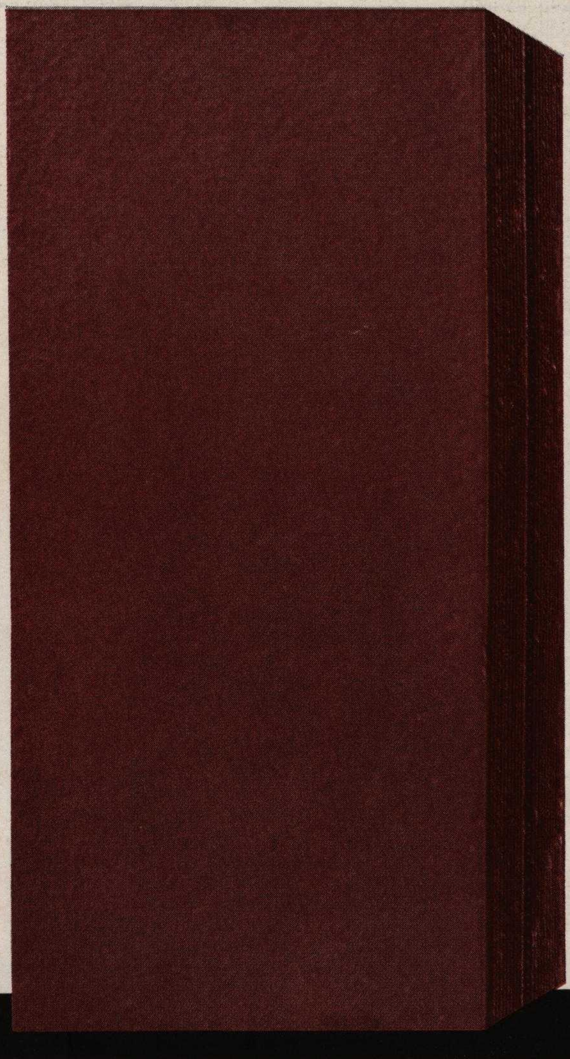
8 x 4½ x 1¾

8 x 3¾ x 2¼

9 x 4½ x 2¼

9 x 4½ x 2½

8 x 4½ x 3¾



◄ Smooth Face

Where sanitation and appearance are of prime importance, smooth face Belden Acid-Proof Brick is recommended. The easily cleaned surface is ideal for schools, churches, hospital floors, dairies, ice cream plants, cheese factories, chemical plants, walks, solariums, basements, filling stations, salesrooms and similar installations. This brick has a grooved bottom and sides are combed and grooved to provide a superior bonding surface.

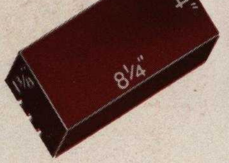
Matt Face ►

A surer tread is gained through use of matt surface. For industrial applications, such as packing house floors, live-stock runways, shipping platforms, and where specific conditions require surer footing than is provided by the smooth face floor brick, the matt brick is sometimes preferred

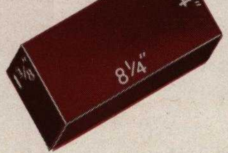
Triangle Pieces for Laying Floor Brick Herringbone Pattern can also be furnished.

It requires four standard size Floor Brick to cover one square foot of surface—the weight of one square foot of brick and joint is 16 lbs.

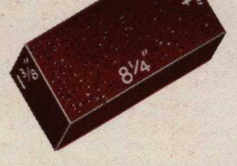
Any shape can be cut to dimensions desired on special order.



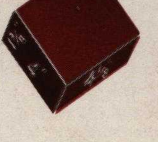
Shape A Smooth Top and Grooved Bottom.



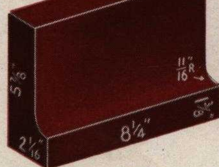
Shape AA Smooth Top and Matt Bottom.



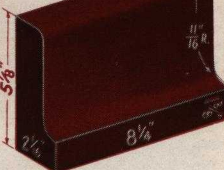
Belden Non-Skid Floor Brick containing Norton Alundum* Non-Slip Grain.



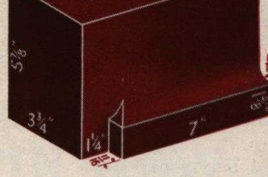
Shape B Floor Brick Halves—Specify Texture Wanted.



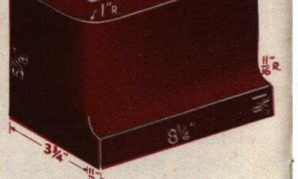
Shape C Cove Base, Square Top.



Shape BC Cove Base, Bullnose Top.



Shape CSS Cove Starter Square Jamb (Left or Right Return).



Shape CSB Cove Starter Bullnose Jamb (Left or Right Return).

Belden Acid-Proof Brick!

IMPORTANT ADVANCEMENT!

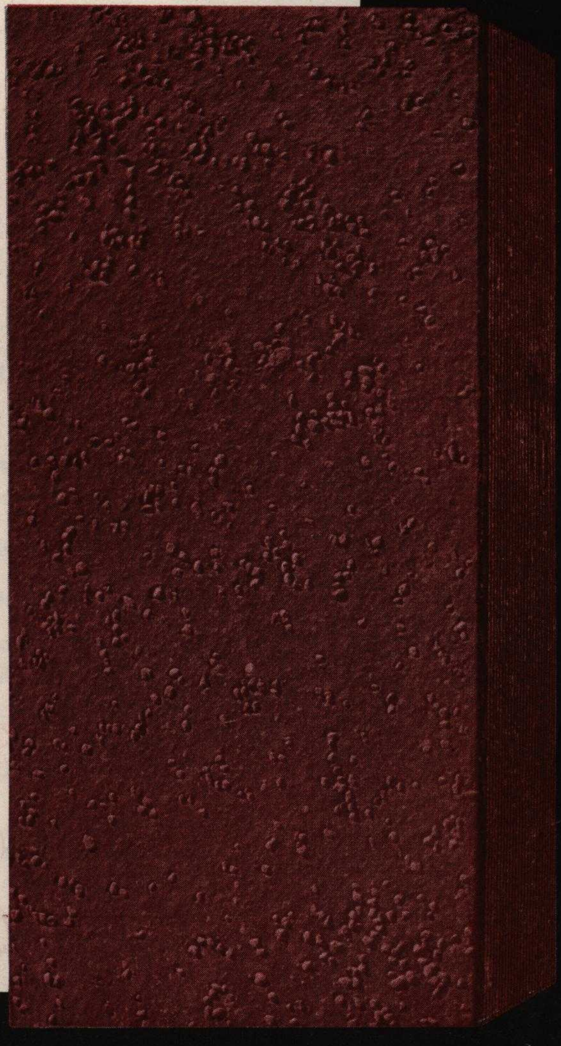
New Non-Skid ALUNDUM

A superior non-slip, non-skid brick has been perfected by Belden engineers.

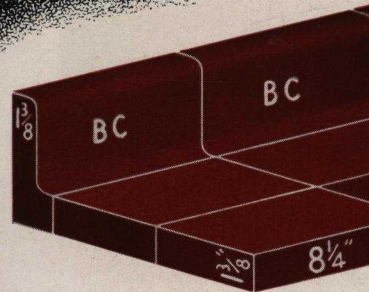
After extensive experimentation, a method was devised for bonding Alundum* Grain to the face of the unburned brick. In the subsequent firing the Alundum* Grain is fused to the vitrified red shale, producing a permanent non-skid surface. The Alundum* Grain is proof against acid, fully as resistant to attack as the shale from which the brick is made.

There are no irregularities of surface in which acids or bacteria can accumulate. Non-skid Alundum* Brick is as easily cleaned as the Smooth Face Floor Brick.

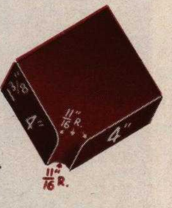
* TRADE MARK OF NORTON COMPANY
REGISTERED U. S. PATENT OFFICE



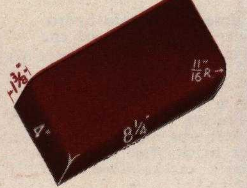
EFFICIENT SHAPES ELIMINATE THE HARD-TO-CLEAN CORNERS AND ANGLES



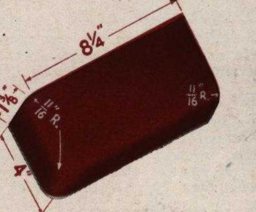
Belden structural units have been developed with an eye to beauty in the smooth curves of the cove base. At the same time an ultimately practical, downright utilitarian solution to cleaning and sanitation problems has been reached. The shapes shown in drawings give an opportunity for the design of efficient, modern installations of Acid-Proof Brick Floors—standard thickness of an inch and three-eighths is sufficient for average industrial and commercial use, but increased floor loads can be accommodated by the five heavier sizes of Acid-Proof Brick as listed on page 10. All floor brick are very hard burned and are shaded to extra dark, dark, medium, and medium light red.



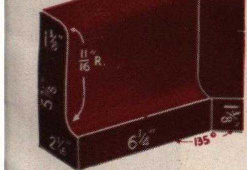
Shape MF Bullnose Internal.



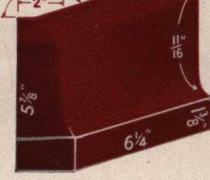
Shape G Bullnose Return (Left or Right Return).



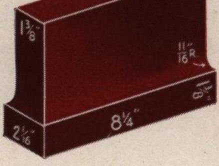
Shape GB Bullnose External (Left or Right Return).



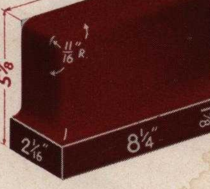
Shape BIC Internal Cove Octagon Base (Left or Right Return).



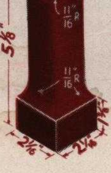
Shape BEC External Cove Octagon Base (Left or Right Return).



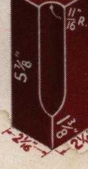
Shape DS External Corner. Square (Left or Right Return).



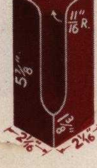
Shape DBB External Corner, Bullnose Top (Left or Right Return).



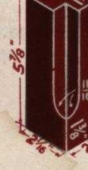
Shape DSB Bullnose External Base.



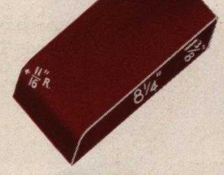
Shape E Internal Corner, Square Top.



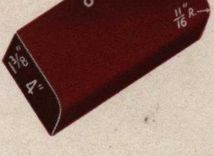
Shape EB Internal Corner, Bullnose Top.



Shape ESS Internal Square Corner, Square Top.



Shape F Bullnose Header.



Shape SF Bullnose Stretcher.

TESTS *Certify* BELDEN BRICK QUALITY

Three reports by recognized testing laboratories give technical data on physical characteristics of Belden Acid-Proof Brick. Specifications for construction or modernization can be based on these figures, with assurance that standards are consistently maintained.

REPORT OF

Belden Floor Brick

We have performed the following tests upon two samples of Belden Floor Brick submitted by you:

OIL ABSORPTION

The brick used in this test was dried and then immersed in heavy mineral oil for twelve hours. The amount of oil absorbed was very small and when the brick was broken and examined visually no sign of absorption into the brick could be seen.

OLEIC ACID

The brick used in this test was immersed in cold oleic acid for sixteen hours to determine whether the brick would be affected by the acids in animal fats and oils. Examination of both brick and acid showed no sign of any action.

HYDROCHLORIC ACID

The brick used in this test was immersed in cold hydrochloric acid for six hours. A surface examination of the brick showed no sign of any action.

TEMPERATURE CHANGE

The brick used in test was given a very severe test. It was heated to 212F. in a bath of boiling water and then plunged in cold water at 40F. This test was repeated three times. A surface examination of the brick after each test showed that only a few small check cracks developed.

VISUAL EXAMINATION

Visual examination of the brick showed it to be very dense and entirely free from laminations.

The results of these tests show, in our opinion based on our experience and judgment, that the samples of brick submitted are of good quality. They show that the bricks are very dense, are acid, grease and water resisting and are not affected by ordinary changes in temperature.

DONALD-HUNT LIMITED
Inspecting and Testing Engineers
1181 Guy St.
Montreal, Quebec, Can.

2ND REPORT OF TESTS

Material: Floor Brick
Specifications: ASTM C67-41
Dark

Following are results of absorption tests made on samples of Floor Brick, which you submitted to our laboratory, and which were designated by Letter "B".

Twenty-Four Hour Submersion Test

Specimen No.:	B-1	B-2	B-3	B-4	B-5
Wet Wgt. Grams:	1620	1626	1617	1645	1620
Dry Wgt. Grams:	1619	1623	1613	1642	1610
Wgt. of water absorbed Grams:	1	3	4	3	10
Percent of water absorbed:	0.06	0.18	0.24	0.18	0.62
Average Percent of Five Brick:					0.25

Five Hour Boiling Test

Specimen No.:	B-1	B-2	B-3	B-4	B-5
Wet Wgt. Grams:	1620	1627	1618	1645	1626
Dry Wgt. Grams:	1619	1623	1613	1642	1610
Wgt. of water absorbed Grams:	1	4	5	3	18
Percent of water absorbed:	0.06	0.20	0.30	0.18	1.1
Average Percent of Five Brick:					0.37

Specimen No.:	B-1	B-2	B-3	B-4	B-5
Saturation Coefficient:	1.0	0.75	0.8	1.0	.55

THE H. C. NUTTING COMPANY
Engineers and Chemists
Cincinnati, Ohio

PITTSBURGH TESTING LABORATORY
Pittsburgh, Pa.

REPORT

Compression Tests of Floor Brick

Specimens were capped with Plaster of Paris, allowed to dry for 24 hours and then tested in a 650,000 pound testing machine.

RESULTS

Specimen No.	Wt. Grams	Dimensions - Inches Depth	Width	Length	Loaded Area Sq. In.	Total Load Lbs.	Crushing Strength Lbs. Per Sq. Inch
1*	1769	1-3/8	4-1/16	8-3/16	33.15	625,000	18,850
2*	1729	1-3/8	4	8-5/16	33.20	625,000	18,800
3**	2299	1-11/16	4-3/8	7-3/4	33.80	625,000	18,500
4**	2294	1-11/16	4-3/8	7-3/4	33.80	625,000	18,500

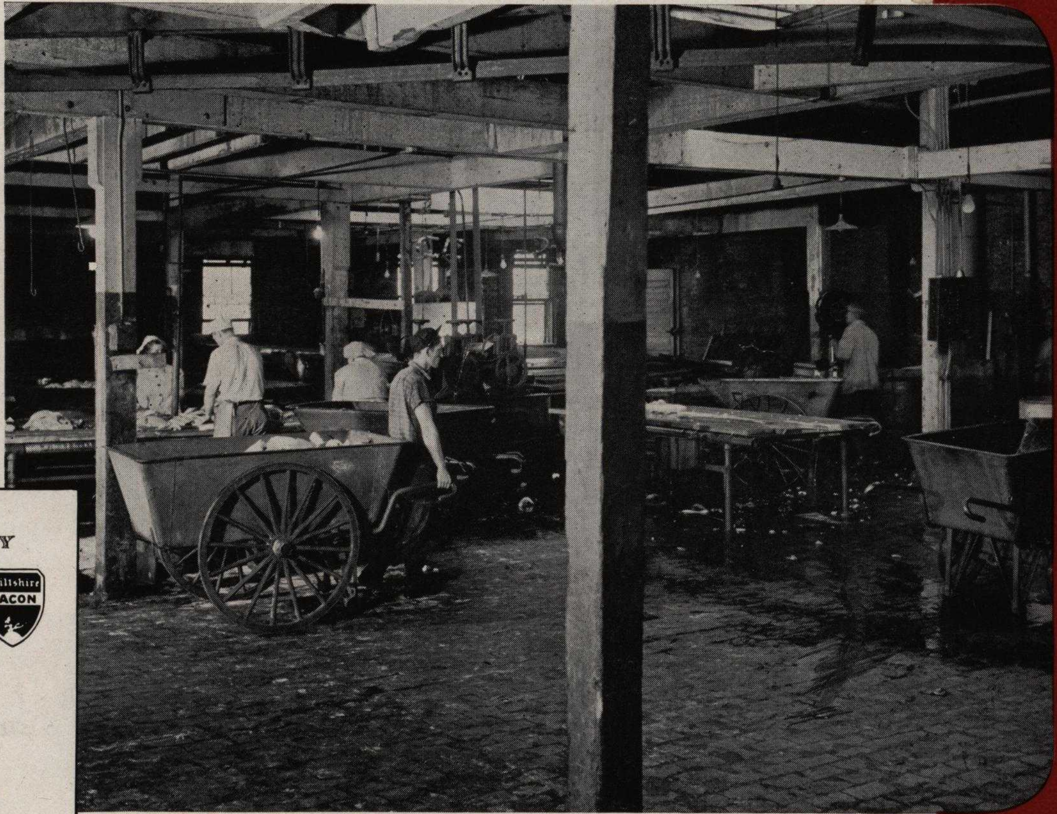
* Fluted Specimens
** Plain Specimens

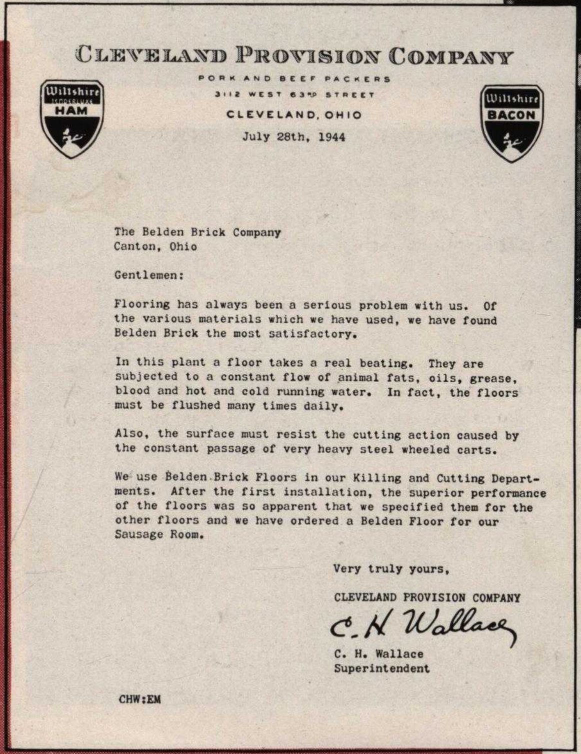
Specimens were loaded flatwise.

NOTE: The specimens were loaded to capacity of testing machine and when removed showed cracks, but had not crushed.

PITTSBURGH TESTING LABORATORY

BELDEN FLOOR PROVES BEST IN SEVERE USE . . .





CLEVELAND PROVISION COMPANY
PORK AND BEEF PACKERS
3112 WEST 63RD STREET
CLEVELAND, OHIO

Wiltshire Tenderluxe HAM

Wiltshire BACON

July 28th, 1944

The Belden Brick Company
Canton, Ohio

Gentlemen:

Flooring has always been a serious problem with us. Of the various materials which we have used, we have found Belden Brick the most satisfactory.

In this plant a floor takes a real beating. They are subjected to a constant flow of animal fats, oils, grease, blood and hot and cold running water. In fact, the floors must be flushed many times daily.

Also, the surface must resist the cutting action caused by the constant passage of very heavy steel wheeled carts.

We use Belden Brick Floors in our Killing and Cutting Departments. After the first installation, the superior performance of the floors was so apparent that we specified them for the other floors and we have ordered a Belden Floor for our Sausage Room.

Very truly yours,

CLEVELAND PROVISION COMPANY

C. H. Wallace

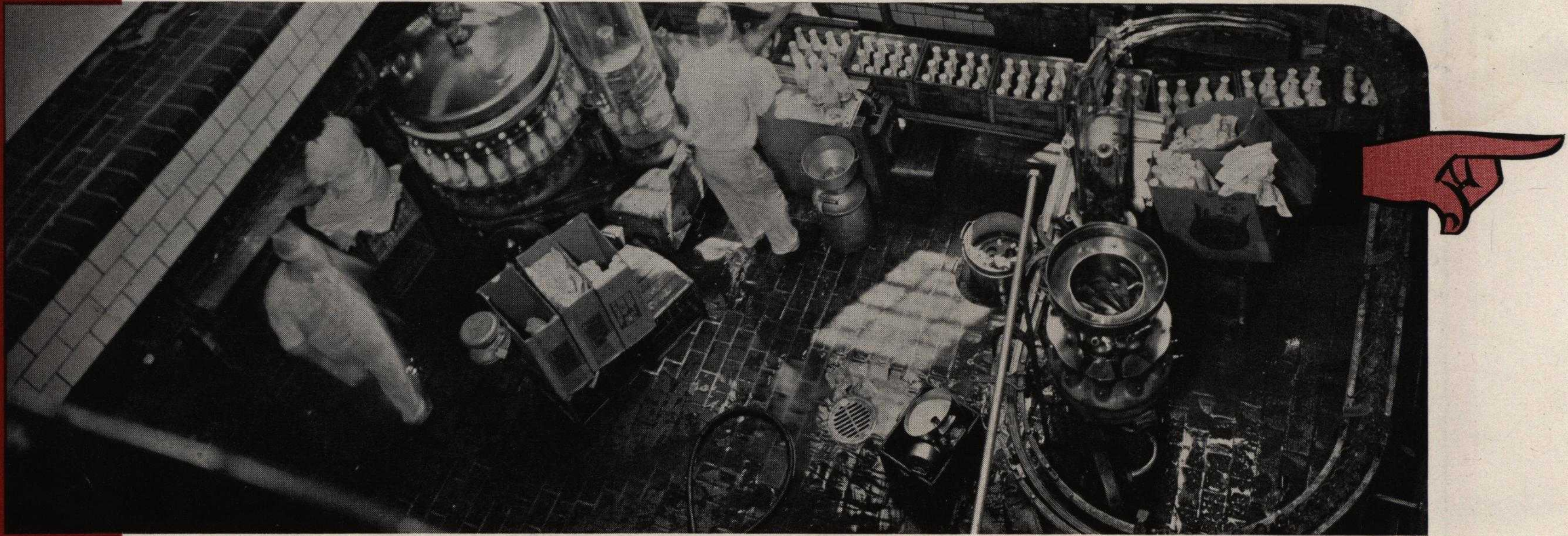
C. H. Wallace
Superintendent

CHW:EM

Floor surfaces in the food industry must meet unusually severe physical and chemical abuse. The standards of cleanliness enforced by inspection authorities make necessary the use of harsh alkalis, hot water, and abrasive powders. Ordinary floors are soon worn out under such conditions. Acid-Proof Brick Floors as built by Belden endure and retain their attractive appearance in spite of foot and wheel traffic, chemical attack of animal and vegetable fats and oils, brines, lactic, fruit and sugar acids. As an example of Belden Acid-Proof Brick service, we reproduce a letter and a photograph from a slaughterhouse operator who has found in his Belden installation the answer to formerly unsolved flooring problems.

Belden

ACID-PROOF BRICK FLOORS



Belden

ACID-PROOF BRICK FLOORS

BATTERING FORCE

The entire metal-working industry now has available a lifetime floor in Belden Acid-Proof Brick. The health hazards (silicosis) and production inconveniences of dirt floors are permanently banished, as are also cracking, gouging, and dusting off of concretes. Belden Floors offer maximum resistance to impacts and heavy loads, for laboratory compression tests show no crushing at a pressure of 18,500 lbs. per square inch. Few concretes can resist better than 4,000 lbs. per square inch.

The battering punishment of dropped castings or tools, heavy steel-wheeled vehicular traffic, and shock of machinery or forge stroke, does not affect Belden's hard-fired red shale surface.

Belden Acid-Proof Brick Floors eliminate the annoyance of continual patching, reinforcing of traffic aisles, filling of gouges and cracks in ordinary floors. The brick is impervious to water erosion which makes necessary resurfacing of concrete floors after loosening of aggregate. Trouble and expense, the woes of maintenance men, are ended once and for all by Belden Floors.

The illustration at left shows a metal-working laboratory of a large steel company and typifies the advanced thinking of industrial architects and management responsible for installation of low-upkeep, long-lived floors. Belden standardized shapes make room planning simple, and assure an absolutely efficient, easy-to-maintain floor.

Belden Acid-Proof Floors Take Punishment and Like It!

ACID and BACTERIA

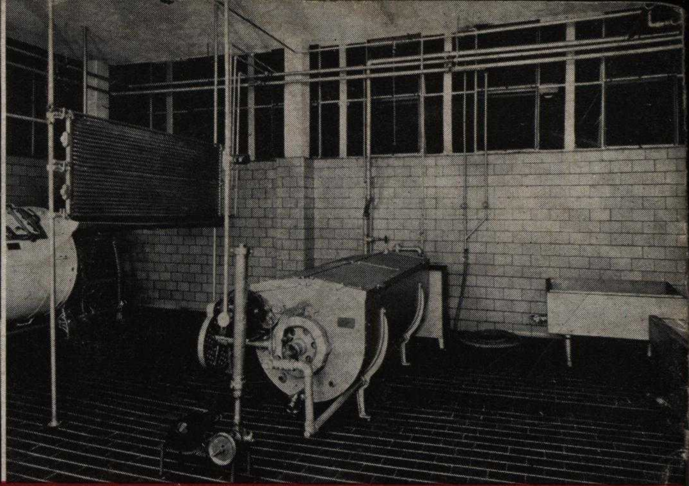
Special cements used with the Acid-Proof Brick produce an impervious, continuous surface that will harbor no destructive bacteria. Organic activity is a threat to all food processing, and its dangers must be minimized to insure a uniformly sound packaged product. The floor is always a source of impurities which may enter food in preparation. Only that surface which will keep possible infection at its lowest point is suitable for food plants. Belden Acid-Proof Brick has every commendable advantage for such installations.

Economy-minded operators of modern food plants have learned that they cannot afford floors which deteriorate or weaken under the corrosive effects of food acids, frequent flushing, extremes of hot and cold, or scraping of metal containers. To keep production moving fast, clean, continuously, these foresighted managers install Acid-Proof floors of Belden Brick, such as that shown in photograph to the left, below.

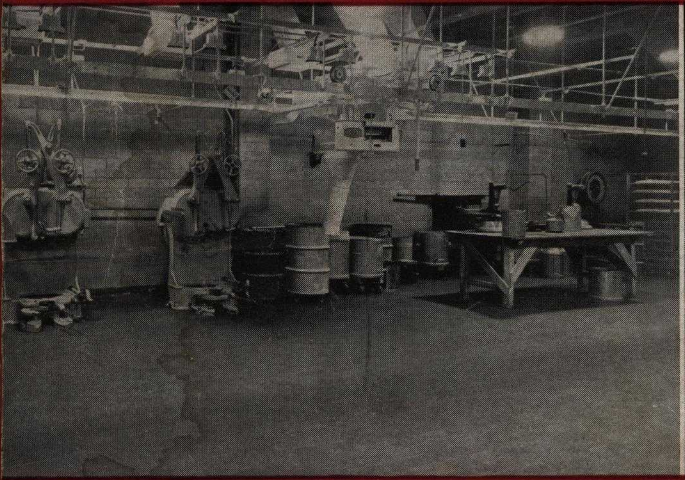
Dairies find brick the ideal surface to resist hot whey, buttermilk, lactic acid, fats, and cleansers. Plants processing candied fruits, cake icings, syrups, soft drinks, pickles and candies, face similar problems and will find Acid-Proof Brick Floors equally efficient in their operations.

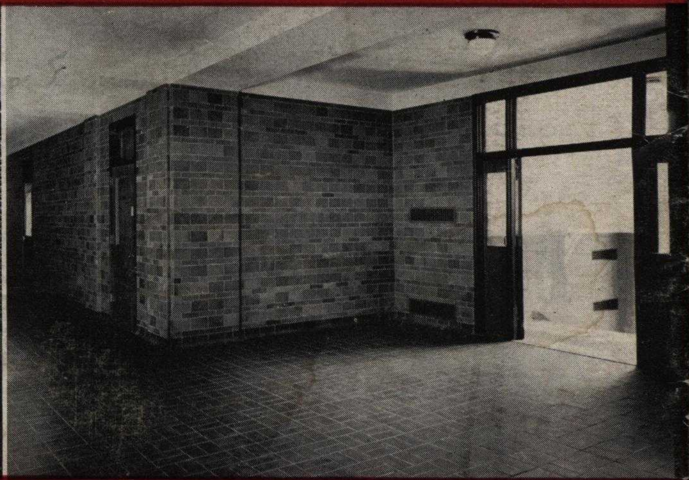
Belden

ACID-PROOF
BRICK FLOORS

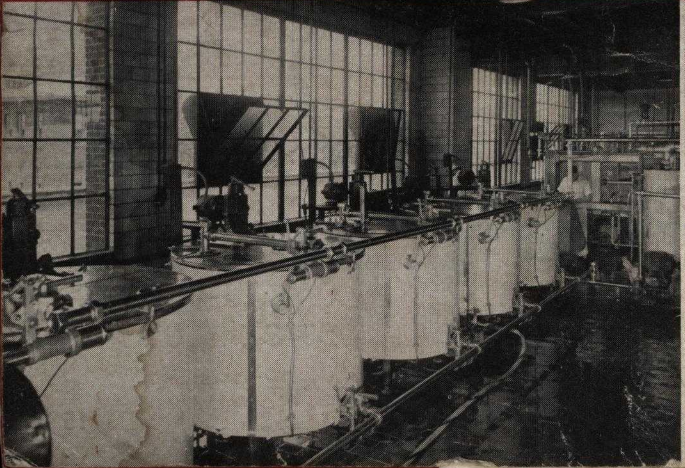
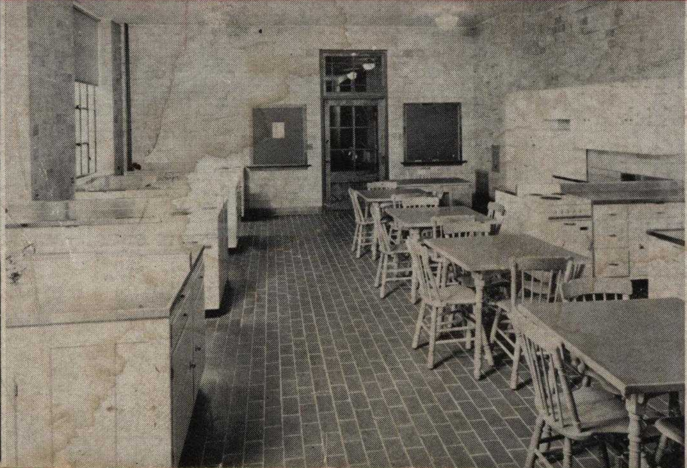
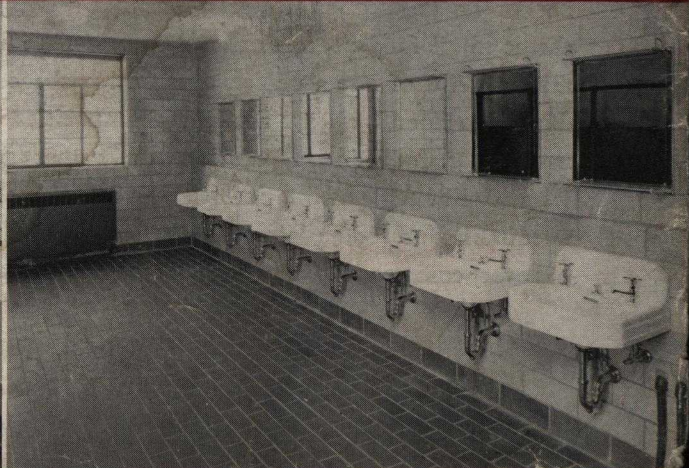


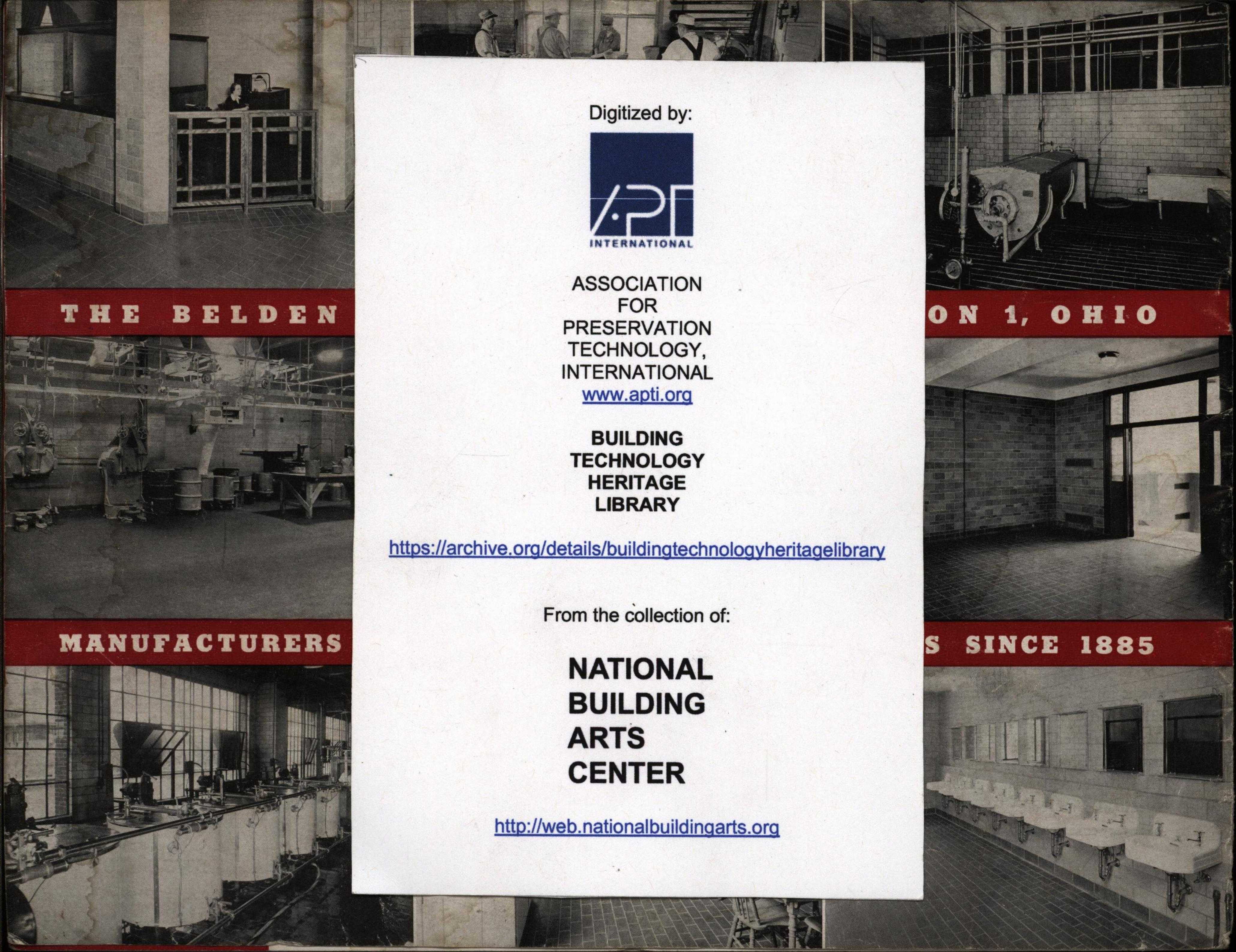
THE BELDEN BRICK COMPANY · CANTON 1, OHIO





MANUFACTURERS OF STRUCTURAL CLAY PRODUCTS SINCE 1885



THE BELDEN … ON 1, OHIO

MANUFACTURERS … S SINCE 1885

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